

U.S. Patent Application Serial No. **10/501,331**
Amendment filed April 6, 2010
Reply to OA dated December 9, 2009

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A disk apparatus that performs information reproduction calculates optimal reproduction laser power by irradiating a laser beam onto data zones of a disk recording medium rotated in a CAV system, comprising:

a determiner for determining a reference reproduction laser power value by subjecting said disk recording medium to a test writing and a test reading at a first reference linear velocity;

a specifier for specifying a current linear velocity coefficient on the basis of a current ambient temperature of said disk recording medium and a current linear velocity at a portion data zone to which said laser beam is currently irradiated,

wherein said specifier updates said current linear velocity coefficient by use of a condition relating to the ambient temperature and linear velocity at a specific data zone; and

a calculator for calculating an optimal reproduction laser power value obtained by multiplying the reference reproduction laser power value determined by said determiner by the optimal current linear velocity coefficient specified by said specifier, wherein,

said specifier specifies said linear velocity coefficient by use of a first relational expression indicative of a relationship between the ambient temperature of said disk recording medium at a second reference linear velocity and a linear velocity coefficient, and a second relational expression indicative of a relationship between said linear velocity coefficient and said current linear velocity.

Claims 2-3 (Canceled)

Claim 4 (Previously Presented): A disk apparatus according to claim 1, wherein said reference reproduction laser power value is obtained by adding a predetermined proportion of a lower limit reproducible laser power value by which said disk recording medium can be reproduced at least to said lower limit reproducible laser power value.

Claim 5 (Previously Presented): A disk apparatus according to claim 1, wherein said reference reproduction laser power value is obtained by subtracting a predetermined proportion of an upper limit reproducible laser power value by which said disk recording medium can be reproduced at most from said upper limit reproducible laser power value.

Claim 6 (Currently Amended): A disk apparatus according to claim 1, wherein said ~~first~~ reference linear velocity at said specific data zone is a linear velocity ~~[[of]]~~ at an innermost data zone periphery in a ZCAV-system.

Claim 7 (Currently Amended): A disk apparatus according to claim 1, wherein said ~~second~~ reference linear velocity at said specific data zone is a linear velocity ~~[[of]]~~ at an outermost data zone periphery in the ZCAV-system.

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Claim 8 (Currently Amended): A disk apparatus according to claim 1, wherein said first condition relates to ~~relational expression is an expression for decreasing a decrease in~~ a value of said linear velocity coefficient as said ambient temperature increases.